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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/677,922
Filing Date: October 01, 2003
Appellant(s): FRIEDLI ET AL.

Hisashi Watanabe
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 22, 2007 appealing from the Office action mailed July 31, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,213,078	Ferrell	7-1980
6,633,152	Sharrah	10-2003
4,728,157	David, Jr.	3-1988

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 9, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ferrell (US 4,213,078).

With respect to claim 1, Ferrell discloses a latch for a rechargeable battery pack (abstract ln 4-8), comprising:

a planar member configured for insertion to the rechargeable battery pack in a first linear direction (no. 30 in Fig. 1 and 3);

at least one spring retention post coupled to the planar member configured to receive a spring force of the rechargeable battery pack directed in a second linear direction opposite the first linear direction (middle sections of no. 30-2 and 30-3 in Fig. 12 and 13, they retain spring no. 30-4);

at least one insertion snap coupled to the planar member configured to resist the spring force and maintain the planar member at a particular position relative to the rechargeable battery pack until released therefrom (no. 30-2 and 30-3 in Fig. 12 and 13

and as seen on no. 30 in Fig. 3 wherein those parts fit into no. 20-5 and stop at 20-4 in Fig. 3); and

at least one barbed wing member coupled to the planar member, extending distally outward from the planar member (either the right or the left side of the middle portion of no. 30-3 in Fig. 12, which is the left or the right semi-circle in the middle of no. 30-3), wherein the at least one barbed wing member supports a pair of barbs extending perpendicularly from the at least one barbed wing member (the edges at the top and bottom of no. 30-3 in Fig. 12 which stick out from the middle portion of no. 30-3 are the pair of barbs).

With respect to claim 2, Ferrell discloses the latch of claim 1, further comprising at least one mechanical stop coupled to the planar member (no. 30-2 in Fig. 12 wherein that part is stopped at no. 20-4 in Fig. 3).

With respect to claim 3, Ferrell discloses the latch of claim 2, further comprising at least one barbed wing member support, wherein the at least one barbed wing member support extends perpendicularly from the planar member such that the barbed wing member is in a non-coplanar geometric relationship with the planar member (as seen on no. 30 in Fig. 3 and bottom sides of 30-1 in Fig. 12).

With respect to claim 4, Ferrell discloses the latch of claim 2, further comprising a finger grip on the planar member (as seen on top of no. 30 in Fig. 3 and col 4 ln 65-67).

With respect to claim 5, Ferrell discloses the latch of claim 1, wherein the latch comprises two barbed wing members, wherein a first barbed wing member extends distally from a first edge of the planar member, and a second barbed wing member extends distally from a second edge of the planar member, wherein the first barbed wing member and the second barbed

wing member are collinear (the right and the left side of the middle portion of no. 30-3 are each considered a barbed wing member in Fig. 12, which is the left and the right semi-circle in the middle of no. 30-3).

With respect to claim 9, Ferrell discloses a rechargeable battery pack, comprising:

at least one rechargeable battery cell (col 3 ln 10);

a housing comprising a top and a bottom, into which the at least one rechargeable battery cell is placed (no. 20 in Fig. 3), wherein the housing comprises at least one latch aperture for receiving a battery latch (opening at end of no. 20 in Fig. 3); and

a latch comprising:

a planar member configured for insertion to the rechargeable battery pack in a first linear direction (no. 30 in Fig. 1 and 3);

at least one spring retention post coupled to the planar member configured to receive a spring force of the rechargeable battery pack directed in a second linear direction opposite the first linear direction (middle sections of no. 30-2 and 30-3 in Fig. 12 and 13, they retain spring no. 30-4); and

at least one insertion snap coupled to the planar member configured to resist the spring force and maintain the planar member at a particular position relative to the rechargeable battery pack until released therefrom (no. 30-2 and 30-3 in Fig. 12 and 13 and as seen on no. 30 in Fig. 3 wherein those parts fit into no. 20-5 and stop at 20-4 in Fig. 3); and

at least one barbed wing member (either the right or the left side of the middle portion of no. 30-3 in Fig. 12, which is the left or the right semi-circle in the middle of

no. 30-3) coupled to the planar member, the at least one barbed wing member extending distally outward from the planar member and supporting a pair of barbs extending perpendicularly from the at least one barbed wing member (the edges at the top and bottom of no. 30-3 in Fig. 12 which stick out from the middle portion of no. 30-3 are the pair of barbs).

With respect to claim 12, Ferrell discloses the battery pack of claim 9, wherein the latch aperture comprises at least one slot for receiving the at least one insertion snap (no. 20-5 and 20-4 at end of no. 20 in Fig. 3 wherein no. 30-2 and 30-3 in Fig. 12 and 13 fit into those slots).

With respect to claim 13, Ferrell discloses the battery pack of claim 9, wherein the latch aperture comprises at least one slot for receiving the at least one mechanical stop (no. 20-4 in Fig. 3 wherein the stop is no. 30-2 in Fig. 12).

With respect to claim 14, Ferrell discloses the battery pack of claim 9, wherein the latch aperture comprises at least one slot for receiving the at least one barbed wing member (no. 20-5 in Fig. 3 wherein the member is no. 30-3 in Fig. 12).

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharrah (US 6,633,152).

With respect to claim 1, Sharrah discloses a latch for a rechargeable battery pack, comprising:

a planar member configured for insertion to the rechargeable battery pack in a first linear direction (no. 81 in Fig. 9);

at least one spring retention post coupled to the planar member configured to receive a spring force of the rechargeable battery pack directed in a second linear direction opposite the first linear direction (sides of no. 84 in Fig. 9);

at least one insertion snap coupled to the planar member configured to resist the spring force and maintain the planar member at a particular position relative to the rechargeable battery pack until released therefrom (no. 82 and 83 in Fig. 9); and

at least one barbed wing member coupled to the planar member, extending distally outward from the planar member (no. 80 in Fig. 9), wherein the at least one barbed wing member supports a pair of barbs extending perpendicularly from the at least one barbed wing member (no. 82 in Fig. 9 and small protrusion to the left of no. 80 and to the upper right of no. 84 in Fig. 9).

With respect to claim 2, Sharrah discloses the latch of claim 1, further comprising at least one mechanical stop coupled to the planar member (right side of case under no. 80 in Fig. 9).

With respect to claim 3, Sharrah discloses the latch of claim 2, further comprising at least one barbed wing member support, wherein the at least one barbed wing member support extends perpendicularly from the planar member such that the barbed wing member is in a non-coplanar geometric relationship with the planar member (no. 83 in Fig. 9).

With respect to claim 4, Sharrah discloses the latch of claim 2, further comprising a finger grip on the planar member (grooves on no. 81 in Fig. 9).

With respect to claim 5, Sharrah discloses the latch of claim 1, wherein the latch comprises two barbed wing members, wherein a first barbed wing member extends distally from a first edge of the planar member, and a second barbed wing member extends distally from a

second edge of the planar member, wherein the first barbed wing member and the second barbed wing member are collinear (middle section of lever protruding from planar member, surrounding no. 83 in Fig. 9, and the second barbed wing member is section under no. 80 and to the right and upper right of spring no. 84 in Fig. 9).

With respect to claim 7, Sharrah discloses the latch of claim 1, wherein the at least one barb comprises at least one inclined planar member (no. 80 in Fig. 9).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharrah (US 6,633,152) in view of Ferrell (US 4,213,078) (with David, Jr. [US 4,728,157] used in the motivation).

With respect to claim 8, Sharrah discloses the latch of claim 7 as noted under the rejection under 35 U.S.C. 102(e), however, does not expressly disclose wherein the latch is manufactured from a material selected from the group consisting of plastics, styrene, ABS, polystyrene, acrylic, polycarbonates, resin, and rubber.

Ferrell discloses wherein the latch is manufactured from plastic or another insulating material (col 4 ln 64-65), so that user would be protected from any shock and so that the latch or device would be lightweight, sturdy, and inexpensive as recited by David, Jr. (US 4,728,157 col 3 ln 50-52).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to make the latch of Sharrah out of an insulating material, in order to prevent the user from any shock and to keep the latch or device lightweight, sturdy, and inexpensive.

6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrell (US 4,213,078) in view of David, Jr. (US 4,728,157).

With respect to claims 10 and 11, Ferrell discloses the battery pack of claim 9 as noted above under the rejection under 35 U.S.C. 102(b) and discloses wherein the latch aperture comprises at least one spring retention post (middle sections of no. 30-2 and 30-3 in Fig. 12 and 13 to which spring no. 30-4 attaches, and col 5 ln 2-4), however, does not expressly disclose the pack further comprising a butterfly spring.

David, Jr. discloses a latch secured into different positions by action of a butterfly spring connected to a spring retention post (spring no. 72 in Fig. 2 is retained by the post which it pivots around in addition to another post at the end of the spring which is connected to the wall no. 16 in Fig. 2 of the device, and col 4 ln 40-44), in order to urge the toggle member into either one of its first and second positions and to provide a definitive latching action (col 4 ln 44-48), which will prevent the disk or other object being secured from coming out of the holder.

Ferrell and David, Jr. are analogous art because they are from the same field of endeavor which is latching mechanisms, and the specification sent in with this application further points out that it would be obvious to those of ordinary skill in the art that the latch assembly may be equally applied to numerous other devices, including detachable accessories (including disk drives).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the battery pack and latch of Ferrell to include a butterfly spring, so that the toggle member could be urged into either of its positions and so that there would be a definitive latching action, which would prevent the battery pack from coming out of its holder.

(10) Response to Argument

A. Claims 1 through 5, 9, and 12 through 14 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,213,078 to Ferrell, et al.

Appellant argues that what the examiner believes to be perpendicular, appellant believes to be co-linear. That is, appellant believes that Fig. 12 shows the top and bottom of no. 30-3 to be co-linear or substantially co-linear (at the slight angle) with the middle portion of no. 30-3, and not perpendicular as the claim requires.

Examiner respectfully disagrees for the following reasons: As noted previously, Ferrell shows at least one barbed wing member (either the right or the left side of the middle portion of no. 30-3 in Fig. 12, which is the left or the right semi-circle in the middle of no. 30-3), wherein the at least one barbed wing member supports a pair of barbs (the edges at the top and bottom of no. 30-3 in Fig. 12 which stick out from the middle portion of no. 30-3 act as the pair of barbs) extending perpendicularly from the at least one barbed wing member. The barbs and barbed wing member are not co-linear, but could be interpreted as co-planar (at least when the barbs are bent when the latch is in place). Since the barbed wing member is circular/cylindrical (or at least semi-circular/cylindrical), any part extending outwardly from the barbed wing member is considered to be perpendicular. To clarify, the barbs can be seen as extensions of the radius of the barbed wing members, and it is well known that a radius passes through the outer portion of a

circle/cylinder at a right angle to the tangent (i.e. perpendicular to the surface). Additionally, the barbs extending in the r direction can be considered to be perpendicular to the z direction – the direction,the screws of Fig. 12 extend (the top planar surface of the barbed wing member extends in three directions of a circular coordinate system, which are r, z, θ).

B. Claims 1-5 and 7 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,633,152 to Sharrah, et al.

Appellant argues that if no. 82 and the protrusion to the left of arrow no. 80 are barbs, then the entire section of the latch member 80 must be the barbed wing member, since claims 1 and 9 require the barbs to extend from the barbed wing member. Appellant also argues that the advisory action is inconsistent with the pervious office actions (especially concerning no. 81 and 82 of Fig. 9).

Examiner respectfully disagrees for the following reasons: To clarify the rejection (due to the lack of labels presented by Fig. 9 of the Sharrah patent), the examiner has presented the figure with additional labels below.

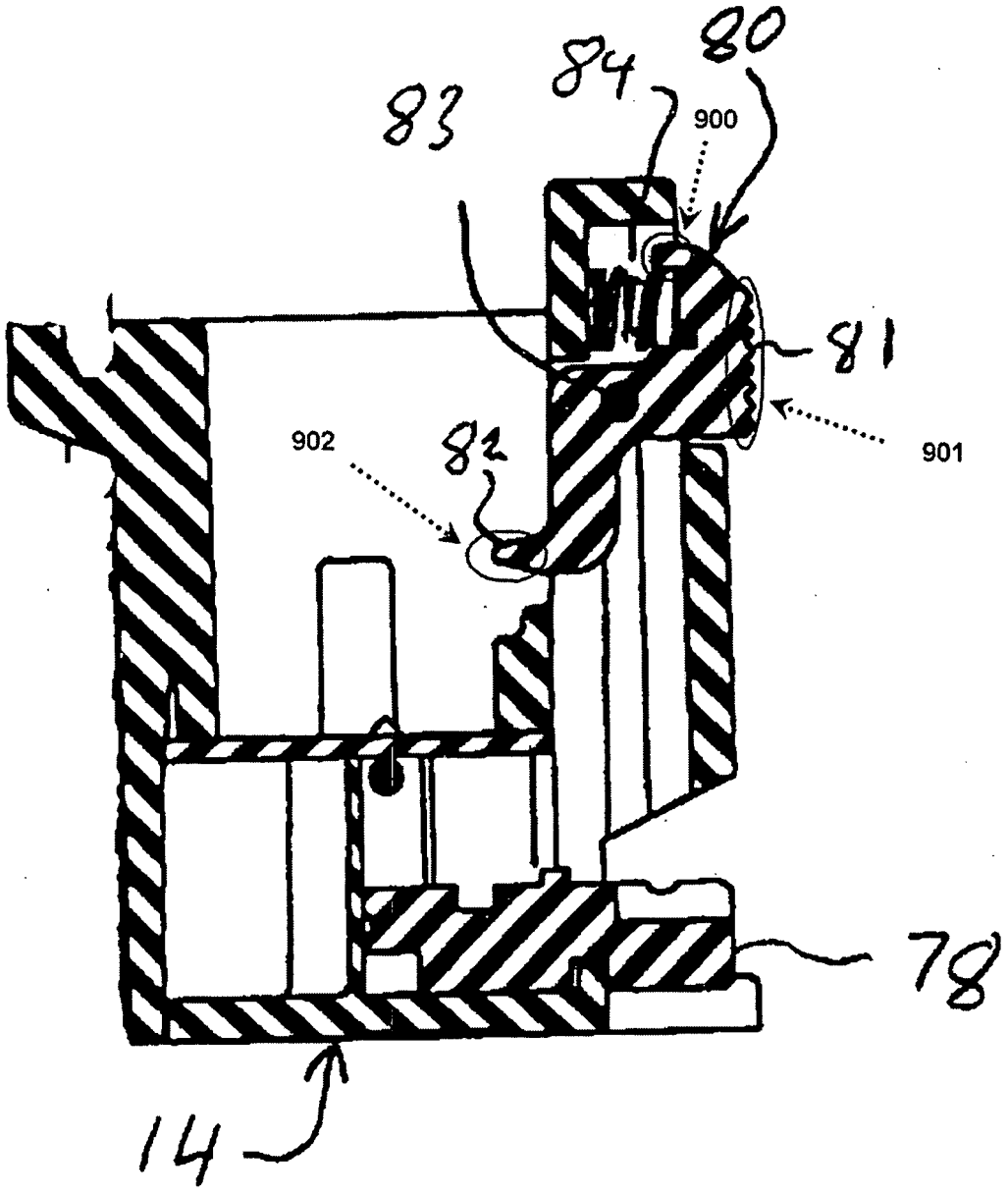

FIG. 9

As seen above, no. 900 and 902 represent the barbs which are supported by the barbed wing member no. 80 in the sense that if the barbed wing member were not in place, the barbs would not have any attachment which created a retention force when applied with the spring no. 84. No. 901 is the planar member. These numbers are added for clarification of the citations presented in the previous rejections; however, the rejections remain the same. Furthermore, the advisory action is not seen as inconsistent with the previous office actions, wherein it is respectfully pointed out that the Figure and the citations presented by the examiner might have been interpreted improperly by the appellant. Additionally, no. 81 was not mentioned in the examiner's copy of the advisory action.

C. Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over the Sharrah, et al. patent in view of the Ferrell, et al. patent.

Appellant's argument refers back to the explanations provided previously for the Sharrah and Ferrell patents. No additional arguments are presented by the appellant concerning claim 8.

Please see the rejection of claim 8 above, wherein the combination provided is still seen as reasonable.

D. Claims 10 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Ferrell, et al. patent in view of U.S. Patent No. 4,728,157 to David, Jr.

Appellant argues that the David, Jr. patent does not describe or suggest a barbed wing member or a pair of barbed wing members extending perpendicularly from the barbed wing members.

Examiner respectfully disagrees for the following reasons: David, Jr. was used in combination with the Ferrell patent for the inclusion of the butterfly spring. The barbed wing

member(s) were already addressed by the Ferrell patent, and therefore, do not need to exist in or be addressed by the David, Jr. patent. The combination of the two references is still seen as reasonable, and the motivation for combining them is provided on pages 8 and 9 of the previous office action (as well as being mentioned above). As previously noted, the David, Jr. and Ferrell references are seen as analogous art because they are from the same field of endeavor, latching mechanisms, and the specification sent in by the appellant further points out that it would be obvious to those of ordinary skill in the art that the latch assembly may be equally applied to numerous other devices, including detachable accessories, including disk drives (pg 6 ln 18-25 of the spec filed 10/1/03).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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